Applied Animal Behaviour Science, 24 (1989) 369–370
Elsevier Science Publishers B.V., Amsterdam — Printed in The Netherlands

Contents of *Applied Animal Behaviour Science*, Volume 24

VOL. 24 NO. 1 AUGUST 1989

The effect of design of tether and stall housing on some behavioural and physiological responses related to the welfare of pregnant pigs
J.L. Barnett, P.H. Hemsworth, E.A. Newman, T.H. McCallum and C.G. Winfield (Werribee, Vic., Australia) 1
Lethargy and low water intake by sows during early lactation: a cause of low piglet weight gains and survival?
D. Fraser and P.A. Phillips (Ottawa, Ont., Canada) 13
Preliminary trials of a sound-activated device to reduce crushing of piglets by sows
T.H. Friend, L.A. O'Connor, D.A. Knabe and G.R. Dellmeier (College Station, TX, U.S.A.) 23
Effects of rain and fly harassment on the feeding behaviour of free-ranging feral goats
E.L. Brindley, D.J. Bullock (St. Andrews, Gt. Britain) and F. Maisels (Edinburgh, Gt. Britain) 31
Weaning in calves: its effects on social organization
I. Veissier and P. Le Neindre (Theix, France) 43
Evaluating equine dominance in draft mares
M.-E. Ellard and S.L. Crowell-Davis (Athens, GA, U.S.A.) 55

Short Communication
Time budgets in Red Junglefowl as a baseline for the assessment of welfare in domestic fowl
M.S. Dawkins (Oxford, Gt. Britain) 77
Proceedings (Papers presented at the Winter Meeting of the Society for Veterinary Ethology, London, Gt. Britain, 30 November 1988) 81

VOL. 24 NO. 2 SEPTEMBER 1989

"Poison-shyness" and "bait-shyness" developed by wild rats (*Rattus rattus* L.). I. Methods for eliminating "shyness" caused by barium carbonate poisoning
G. Naheed and J.A. Khan (Aligarth, India) 89
Homosexual and social behaviours of young bulls of different geno- and phenotypes and plasma concentrations of some hormones
T.A. Jezierski, I. Sieradzka (Mroków, Poland), M. Koziorowski (Olsztyn-Kortowo, Poland) and J. Goszczyński (Wejsuny, Poland) 101
Orientation to the sun of British and exotic breed cross cows during the winter
A.D. Kennedy and A.C. Day (Winnipeg, Manitoba, Canada) 115
The effect of group size and space allowance on the agonistic and spacing behavior of cattle
S. Kondo, J. Sekine, M. Okubo and Y. Asahida (Sapporo, Japan) 127
Influence of neighbours on stereotypic behaviour of tethered sows
M.C. Appleby, A.B. Lawrence and A.W. Illius (Edinburgh, Gt. Britain) 137
An analysis of the open-field performance of sub-adult rabbits
F.M. Meijsser, A.M.P. Kersten, P.R. Wiepkema and J.H.M. Metz (Wageningen, The Netherlands) 147
Effects of early handling on later open-field behaviour in rabbits
A.M.P. Kersten, F.M. Meijsser and J.H.M. Metz (Wageningen, The Netherlands) 157
The phenomenon of pandiculation in the kinetic behaviour of the sheep fetus
A.F. Fraser (St. John's, Newfoundland, Canada) 169

VOL. 24 NO. 3 OCTOBER 1989

Social relationships of reindeer *Rangifer tarandus* during rut: implications for female choice
A. Hirotani (Aichi, Japan) 183
The effect of forage supplementation, herbage height and season on the ingestive behaviour of dairy cows
C.J.C. Phillips and K. Hecheimi (Bangor, Gt. Britain) 203
Frequency of masturbation and time budgets of dairy bulls used for semen production
K.A. Houpt and G. Wollney (Ithaca, NY, U.S.A.) 217
Suckling behaviour and milk consumption in newborn piglets as a response to sow grunting
H. Castrén, H. Saloniemi (Helsinki, Finland), B. Algers and P. Jensen (Skara, Sweden) 227
Food intake by free-grazing sheep and resource productivity
A. El Aich, M. Touibi (Rabat, Morocco) and L.R. Rittenhouse (Fort Collins, CO, U.S.A.) 239
Fostering lambs by odor transfer: two-lamb substitution
L.N. Holmes, E.O. Price, M.R. Dally and S.J.R. Wallach (Davis, CA, U.S.A.) 247

Short Communications
Feeding station behaviour of free-grazing sheep
A. El Aich, A. Moukadem (Rabat, Morocco) and L.R. Rittenhouse (Fort Collins, CO, U.S.A.) 259
Coprophagy by foals: recognition of maternal feces
S.L. Crowell-Davis and A.B. Caudle (Athens, GA, U.S.A.) 267

VOL. 24 NO. 4 NOVEMBER 1989

Methodology for measuring hunger and food needs using operant conditioning in the pig
A.B. Lawrence and A.W. Illius (Edinburgh, Gt. Britain) 273
Social preferences of domestic ewes for rams (*Ovis aries*)
D.Q. Estep (Athens, GA, U.S.A.), E.O. Price, S.J.R. Wallach and M.R. Dally (Davis, CA, U.S.A.) 287
Ram mating preferences for woolly rather than recently shorn ewes
A.J. Tilbrook (Werribee, Vic., Australia) and A.W.N. Cameron (Clayton, Vic., Australia) 301
Ethinyl estradiol and generalized aversions to eggs among free-ranging predators
L.K. Nicolaus, J. Herrera, J.C. Nicolaus (DeKalb, IL, U.S.A.) and C.R. Gustavson (Tempe, AZ, U.S.A.) 313
Inter-individual distances and orientation in laying hens housed in groups of three in two different-sized enclosures
L.J. Keeling and I.J.H. Duncan (Roslin, Gt. Britain) 325
Grazing distribution of sheep and kangaroos in a semi-arid woodland
J.W. Terpstra and A.D. Wilson (Deniliquin, N.S.W., Australia) 343

Short Communication
The effect of daylength and weather conditions on the time spent by western grey kangaroos (*Macropus fuliginosus*) on farmland
G.W. Arnold, D.E. Steven and J.R. Weeldenburg (Midland, WA, Australia) 353

Author Index 361
Subject Index 365